

City Service Area

Environmental and Utility Services



Electrical Reliability Project



**South Bay Water Recycling
Program
New Reservoirs**

Mission: Provide environmental leadership through policy development, program design and reliable utility services.

In 2004-2005, the Water Pollution Control Plant (Plant) awarded the \$89 million Plant Reliability Improvements Project. Construction is scheduled for completion in October 2007, ten months ahead of schedule. These improvements will increase peak flow capacity to 400 million gallons per day. Design of the Electrical Reliability Project to begin addressing the Plant's aging electrical system is currently underway. The Electrical Reliability Project is programmed over multiple years. The total budget for the project is \$83 million. Design of the Alternative Disinfection System project to replace the use of gaseous chlorine and sulfur dioxide at the Plant is nearing completion and construction is scheduled to begin in 2007-2008. Also, the Plant will begin development of a 30-year master plan to address future needs.

The South Bay Water Recycling Program will install two emergency generators and provide an enclosure over existing equipment to increase operation reliability. Water Utility System projects in the Adopted CIP include the construction of new facilities, maintenance of existing infrastructure, and improvements to facilities.

The Storm Sewer System Capital Improvement Program continues to implement a strategy to replace or rehabilitate the oldest and least reliable pump stations and storm outfalls. The program is also broadening its scope from enhancing area-wide drainage capacity to addressing the drainage needs in residential neighborhoods, neighborhood business districts, and walking routes to schools and public facilities. A new, high-priority focus will be the comprehensive rehabilitation and upgrading of storm system infrastructure in Alviso.

CSA CAPITAL PROGRAMS

- Sanitary Sewer System Capital Program
- Storm Sewer System Capital Program
- Water Pollution Control Capital Program
- Water Utility System Capital Program

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Recent Accomplishments

- Completed the following projects: Albany-Kiely Phase II, Alma Avenue, Chateau Drive Phase I, Lincoln-Brace, New Jersey Avenue, West San Carlos Street, Willow Street Storm Pump Station, Gold Street (Alviso) Junction Structure Flapgate replacement, Gold Street Main Relocation, Reservoir Seismic Retrofit, South Bay Water Recycling Program (SBWRP) SJ-11 Zone 3 Reservoir and Pipeline Project, and the SJ-13 SJ/SC Coleman Avenue Connection.
- Attained 90% completion status for the Plant Reliability Improvements project which continues to track several months ahead of schedule.
- Completion of the 60-inch Sewer Replacement Phase 1B, substantial progress in the construction of the 84-inch RCP Rehabilitation Phase V1B.
- Completion of the North Coyote Valley Water System, including three wells to supply MEC and other developments

Program Highlights

Sanitary Sewer System Capital Program

2008-2012 Adopted CIP: \$121.1 million

Neighborhood Sanitary Sewer Rehabilitation Projects:

- Alum Rock Avenue, Julian-Sunol Area, Willow Glen area and Union/Almaden Oak

Sanitary Sewer Interceptor/Capacity Improvement Projects:

- 84" RCP Interceptor Rehabilitation project
- 30" Old Bayshore Supplement
- Central Interceptor Sewer
- Cropley Avenue Sewer Improvement
- Edenvale Sanitary Sewer Supplement Phases VA and VB

Storm Sewer System Capital Program

2008-2012 Adopted CIP: \$14.8 million

- Albany-Kiely Storm Drainage Improvement - Phases III & IV
- Alviso Storm Rehabilitation
- Chateau Drive Storm Drain Improvement, Phase I & II
- Storm Drainage Improvements – Special Corridors
- Storm Pump Station Rehabilitation and Replacement

Water Pollution Control Capital Program

2008-2012 Adopted CIP: \$265.6 million

- 1MW Fuel Cell Cogeneration System
- Plant Electrical Reliability
- Development of the Plant Master Plan

Water Utility System Capital Program

2008-2012 Adopted CIP: \$28.9 million

- Bon Bon Drive Main Replacement
- Villa Vista Reservoir Rehabilitation
- Norwood Pump Station Replacement
- North First Street Parallel Main

CSA OUTCOMES

(Supported by the Capital Programs)

- ✓ Reliable Utility Infrastructure
- ✓ Healthy Streams, Rivers, Marsh and Bay
- ✓ Safe, Reliable and Sufficient Water Supply

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Performance Measures

A set of consistent and comprehensive performance measurements along with targets and goals have been established for the entire capital program and adopted for each individual CSA. Measures have been established for four key areas: schedule (cycle time); cost, quality; and customer satisfaction. Please see the Budget Guide section narrative for additional information on capital performance measurements.

Outcome: Quality CIP Projects Delivered On-Time and On-Budget

5 Year Strategic Goals		2008-2012 5-yr Goal	2006-2007 1-yr Target	2006-2007 Estimate	2007-2008 1-yr Target	2008-2009 2-yr Target
Environmental and Utility Services CSA delivers quality Capital Improvement Program (CIP) projects on-time and on-budget	1. % of CIP projects delivered* within 2 months of approved baseline schedule	85%	85%	78% (14/18)	85%	85%
	2. % of CIP projects that are completed** within the approved baseline budget	90%	90%	90% (9/10)	90%	90%
	3. % of operations and maintenance divisions rating new or rehabilitated capital facilities as being functional and sustainable after first year of use	80%	80%	80%	80%	80%
	4. % of customers rating new or rehabilitated CIP projects as meeting established goals (4 or better based on a scale of 1-5)	85%	85%	85%	85%	85%

Changes to Performance Measures from 2006-2007 Adopted Budget: Yes¹

* Projects are considered to be "delivered" when they are available for their intended use.

** Projects are considered to be "completed" when final cost accounting has occurred and the project has been accepted.

¹ Changes to Performance Measures from 2006-2007 Adopted Budget:

✕ "% of project delivery costs compared to total construction costs for projects: less than \$500,000, between \$500,000 and \$3,000,000, greater than \$3,000,000" has been eliminated from each CSA, and replaced by a new measure in the Public Works Department Plan, Design and Construct Public Facilities core service located in the 2007-2008 Adopted Operating Budget. The revision introduces an improved methodology which captures more complete project delivery costs and sets targets based on benchmarks by project type.

In 2006-2007, the Environmental and Utility Services CSA delivered an estimated 14 of 18 (78%) of projects within two months of the approved baseline schedule, which is below the target of 85%. This CSA has consistently performed at or near the performance target for this measurement in the past as project teams remain proactive at identifying potential impediments during the early stages of project development and work to resolve these issues as quickly as possible so as to minimize their impact on project schedules. Project delays that do occur are primarily related to required coordination with outside agencies as well as unforeseen construction related delays.

Performance Measures (Cont'd.)

In 2006-2007, an estimated 90% of accepted projects were delivered within their baseline budget amount, which meets the performance target of 90%. The CSA continues its effort to improve the cost estimating process in an effort to meet or exceed the performance target. Additional cost tracking tools have been developed through the City's Capital Project Management System (CPMS), which allow project management staff to effectively track project costs on an ongoing basis and ensure that all expenditures are appropriate and remain within budgeted levels. Instances in which projects do exceed the baseline budget can be attributed to bidding irregularities, redesign costs and additional staff costs needed to resolve unforeseen construction issues.

The CSA is continuing its efforts to conduct operations, maintenance, and customer satisfaction surveys on completed projects. For each measurement, staff is conducting surveys on a representative sample of projects that are completed during the year. In the case of the operations and maintenance survey measurement, staff is conducting surveys on projects that have been completed and in use for at least one year. Preliminary survey results for the operations, maintenance and customer satisfaction measurements indicate the CSA is delivering projects that meet established goals at targeted levels. Staff is continuing to analyze survey results to determine improvements that could be incorporated into future projects. Staff is also evaluating more effective methods of conducting these surveys, including improvements to the structure and format as well as the use of web-based surveys, which will yield a higher percentage of returned surveys.

Capital Program Summary by City Service Area

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	2007-2008 Budget	2008-2012 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Sanitary Sewer System</u>					
<u>Capital Program</u>					
30" Old Bayshore Supplement		3,907,000	3,907,000	3rd Qtr. 2008	2nd Qtr. 2010
60" Brick Interceptor, Phase VIA & VIB	1,734,000	18,764,000	53,722,382	3rd Qtr. 2007	2nd Qtr. 2010
84" RCP Interceptor, Phases VB & VIB	1,000,000	1,229,000	11,543,000	3rd Qtr. 2004	3rd Qtr. 2008
Almaden Road Supplement Sewer Rehabilitation (North)		2,031,000	2,031,000	3rd Qtr. 2009	2nd Qtr. 2011
Almaden Road Supplement Sewer Rehabilitation (South)		2,333,000	2,333,000	3rd Qtr. 2009	2nd Qtr. 2011
Alum Rock Avenue Sanitary Sewer Rehabilitation	865,000	975,000	1,025,000	3rd Qtr. 2006	2nd Qtr. 2009
CIP Database Enhancement	6,000	6,000	9,000	3rd Qtr. 2004	2nd Qtr. 2007
Capitol Avenue Sanitary Sewer Improvement		1,289,000	1,289,000	3rd Qtr. 2011	2nd Qtr. 2012
Central Interceptor Sewer Rehabilitation	155,000	2,033,000	2,033,000	3rd Qtr. 2007	2nd Qtr. 2010
Cheney Drive Sanitary Sewer Rehabilitation	436,000	436,000	586,000	3rd Qtr. 2006	2nd Qtr. 2008
City Hall Debt Service Fund	223,000	1,213,000	1,244,000	N/A	N/A
Coleman Road Sanitary Sewer Improvement		2,022,000	2,022,000	3rd Qtr. 2011	2nd Qtr. 2012
Cropley Avenue Sanitary Sewer Improvement		3,484,000	3,484,000	3rd Qtr. 2011	2nd Qtr. 2012
Edenvale Sanitary Sewer Supplement, Phases VA and VB	19,183,000	29,693,000	33,336,000	2nd Qtr. 2001	4th Qtr. 2009
Fee Administration	106,000	586,000	*	Ongoing	Ongoing
Flow Monitoring Program (Master Planning)	3,050,000	7,342,000	*	Ongoing	Ongoing
Forest-Rosa Sewer	26,000	26,000	7,134,000	3rd Qtr. 2004	3rd Qtr. 2007
Gateway East Sanitary Sewer Improvements Phase II	103,000	103,000	103,000	3rd Qtr. 2007	2nd Qtr. 2008
Geographic Information System (GIS)	53,000	214,000	*	Ongoing	Ongoing
Hobson-Walnut Area	175,000	175,000	1,175,000	1st Qtr. 2005	3rd Qtr. 2007
Hydrogen Peroxide Injection Station	164,000	164,000	300,000	3rd Qtr. 2006	4th Qtr. 2007
Inflow and Infiltration Reduction	2,000,000	6,000,000	*	Ongoing	Ongoing
Julian-Sunol Supplement Sewer Rehabilitation	1,207,000	1,521,000	1,521,000	3rd Qtr. 2007	2nd Qtr. 2009
Miscellaneous Projects	3,430,000	8,130,000	*	Ongoing	Ongoing
Miscellaneous Rehabilitation Projects	5,500,000	10,500,000	*	Ongoing	Ongoing
Monterey-Riverside Supplement	140,000	140,000	8,005,000	1st Qtr. 1998	3rd Qtr. 2007
Morrill Avenue/Sierra Road Sanitary Sewer Improvement		1,857,000	1,857,000	3rd Qtr. 2011	2nd Qtr. 2012
Payments to West Valley Sanitation District	10,000	50,000	*	Ongoing	Ongoing

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	2007-2008 Budget	2008-2012 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Sanitary Sewer System (Cont'd.)</u>					
<u>Capital Program</u>					
Permit Review and Inspection for Outside Agencies	75,000	375,000	*	Ongoing	Ongoing
Preliminary Engineering	730,000	3,825,000	*	Ongoing	Ongoing
Program Management	415,000	2,140,000	*	Ongoing	Ongoing
Public Art	71,000	508,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	710,000	2,948,000	*	Ongoing	Ongoing
Public Works Engineering Services Equipment (Materials Lab)	38,000	199,000	*	Ongoing	Ongoing
Rosemary Area	30,000	30,000	1,350,000	3rd Qtr. 2002	3rd Qtr. 2007
Union/Almaden Oak Sanitary Sewer Rehabilitation	1,574,000	1,596,000	1,596,000	3rd Qtr. 2007	2nd Qtr. 2009
Willow Glen Sanitary Sewer Rehabilitation	1,088,000	1,128,000	1,128,000	3rd Qtr. 2007	2nd Qtr. 2009
Willow-Union Trunk Sewer	19,000	19,000	2,331,000	3rd Qtr. 2004	2nd Qtr. 2007
Total: Construction/Non-Construction	44,316,000	118,991,000			
Ending Fund Balance	8,283,326	2,101,326 **			
Total: Sanitary Sewer System Capital Program	52,599,326	121,092,326 **			
 <u>Storm Sewer System</u>					
<u>Capital Program</u>					
Albany-Kiely Storm Drainage Improvement, Phase III & IV	1,320,000	2,948,000	5,543,000	3rd Qtr. 2006	2nd Qtr. 2012
Alviso Storm Rehabilitation	1,000,000	2,000,000	2,000,000	3rd Qtr. 2007	2nd Qtr. 2009
Chateau Drive Storm Drain Improvement, Phase I & II	132,000	715,000	1,390,000	3rd Qtr. 2005	2nd Qtr. 2009
City Hall Debt Service Fund	77,000	419,000	429,000	N/A	N/A
Creek Channel Stabilization		600,000	600,000	3rd Qtr. 2011	2nd Qtr. 2012
Fee Administration	57,000	312,000	*	Ongoing	Ongoing
Flow Monitoring System	9,000	45,000	*	Ongoing	Ongoing
Geographic Information Systems	8,000	40,000	*	Ongoing	Ongoing
Master Planning	10,000	50,000	*	Ongoing	Ongoing
Minor Neighborhood Storm Drain Improvements	180,000	1,800,000	*	Ongoing	Ongoing
Miscellaneous Projects	500,000	1,170,000	*	Ongoing	Ongoing
Outfall Rehabilitation - Capital	100,000	580,000	600,000	2nd Qtr. 2007	3rd Qtr. 2010

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	2007-2008 Budget	2008-2012 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Storm Sewer System</u> (Cont'd.)					
<u>Capital Program</u>					
Permit Review and Inspection for Outside Agencies	25,000	125,000	*	Ongoing	Ongoing
Preliminary Engineering	80,000	330,000	*	Ongoing	Ongoing
Program Management	80,000	330,000	*	Ongoing	Ongoing
Public Art	41,000	75,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	80,000	400,000	*	Ongoing	Ongoing
Ross-Guadalupe Storm Drain Improvements		401,000	401,000	3rd Qtr. 2011	4th Qtr. 2012
Storm Drainage Fee Study	50,000	50,000	50,000	3rd Qtr. 2007	2nd Qtr. 2008
Storm Drainage Improvements - Special Corridors	150,000	1,200,000	2,196,000	3rd Qtr. 2005	2nd Qtr. 2012
Storm Pump Station Rehab & Replacement	500,000	500,000	*	Ongoing	Ongoing
Storm/Sanitary Sewer Separation		500,000	500,000	3rd Qtr. 2010	2nd Qtr. 2012
Total: Construction/Non-Construction	4,399,000	14,590,000			
Ending Fund Balance	190,463	214,463 **			
Total: Storm Sewer System Capital Program	4,589,463	14,804,463 **			
<u>Water Pollution Control</u>					
<u>Capital Program</u>					
1MW Fuel Cell Cogeneration System	5,200,000	6,800,000	6,800,000	3rd Qtr. 2007	2nd Qtr. 2009
Alternative Disinfection	6,291,000	6,291,000	6,680,000	2nd Qtr. 2004	2nd Qtr. 2009
City Hall Debt Service	37,000	202,000	210,300	N/A	N/A
Digester Gas Line Replacement	1,100,000	10,100,000	10,100,000	4th Qtr. 2007	2nd Qtr. 2012
Dissolved Air Flotation Pressure Retention Tank & Valves		600,000	2,202,000	2nd Qtr. 2005	4th Qtr. 2016
Equipment Replacement	2,553,000	11,273,000	*	Ongoing	Ongoing
Filtration Action Plan-Valve Replacement		2,600,000	8,600,000	4th Qtr. 2010	2nd Qtr. 2013
Fire Line Replacement	150,000	550,000	750,000	3rd Qtr. 2006	2nd Qtr. 2012
Inactive Lagoons Bio-Solids Removal Study	100,000	100,000	138,000	3rd Qtr. 2002	2nd Qtr. 2008
M5, Ring Buss, & Cable Replacement	7,788,000	7,788,000	8,200,000	3rd Qtr. 2006	2nd Qtr. 2010
Payment for Clean Water Financing Authority Trustee	82,000	410,000	*	Ongoing	Ongoing
Plant Electrical Reliability	5,000,000	58,000,000	83,279,000	3rd Qtr. 2007	2nd Qtr. 2015

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	2007-2008 Budget	2008-2012 CIP Budget	Total Budget (All Years)	Start Date	End Date
Water Pollution Control (Cont'd.)					
Capital Program					
Plant Infrastructure Improvements	14,552,000	55,301,000	*	Ongoing	Ongoing
Plant Master Plan	2,500,000	6,000,000	6,000,000	3rd Qtr. 2007	1st Qtr. 2010
Public Art	102,000	738,000	*	Ongoing	Ongoing
Reserve for Equipment Replacement	5,000,000	5,000,000	5,000,000	N/A	N/A
Reserve for GRS Inc. Agreement	500,000	500,000	500,000	3rd Qtr. 2002	2nd Qtr. 2008
Reserve for Plant Master Plan Improvements		5,000,000	65,000,000	3rd Qtr. 2011	4th Qtr. 2019
Reserve for Rate Studies	200,000	200,000	200,000	N/A	N/A
Revised South Bay Action Plan - SBWR Extension	2,389,000	6,945,000	*	Ongoing	Ongoing
Scum Digestion	2,350,000	2,350,000	2,600,000	3rd Qtr. 2006	2nd Qtr. 2008
Secondary and Nitrification Clarifier Rehabilitation and Upgrade		4,000,000	19,000,000	4th Qtr. 2008	2nd Qtr. 2018
South Bay Water Recycling Water Storage Facility		6,000,000	6,000,000	3rd Qtr. 2008	2nd Qtr. 2010
State Revolving Fund Loan Repayment	4,464,000	22,320,000	88,280,000	3rd Qtr. 1998	2nd Qtr. 2019
Transfer to Clean Water Financing Authority Debt Service Payment Fund	7,007,000	35,088,000	84,926,000	2nd Qtr. 1996	4th Qtr. 2020
Unanticipated/Critical Repairs	250,000	1,250,000	*	Ongoing	Ongoing
WPCP Reliability Improvements	3,613,000	3,613,000	87,923,000	2nd Qtr. 2003	2nd Qtr. 2008
Warehousing Facility Additions		600,000	600,000	4th Qtr. 2010	4th Qtr. 2011
Total: Construction/Non-Construction	71,228,000	259,619,000			
Ending Fund Balance	38,872,969	5,959,969	**		
Total: Water Pollution Control Capital Program	110,100,969	265,578,969	**		
Water Utility System					
Capital Program					
Advance System Design	330,000	1,750,000	*	Ongoing	Ongoing
Bon Bon Drive Main Replacement		1,000,000	1,000,000	3rd Qtr. 2010	3rd Qtr. 2012
Castleton Drive Main Replacement		900,000	900,000	3rd Qtr. 2009	2nd Qtr. 2011
City Hall Debt Service Fund	9,000	49,000	53,100	N/A	N/A
Forestwood Drive Main Replacement	560,000	560,000	1,000,000	3rd Qtr. 2006	4th Qtr. 2007

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	2007-2008 Budget	2008-2012 CIP Budget	Total Budget (All Years)	Start Date	End Date
Water Utility System (Cont'd.)					
Capital Program					
Infrastructure Improvements	520,000	2,400,000	*	Ongoing	Ongoing
Loan Repayment to Sewage Treatment Plant Connection Fee Fund	700,000	3,500,000	6,650,000	3rd Qtr. 2004	3rd Qtr. 2013
Major Facilities Fee Administration	15,000	75,000	*	Ongoing	Ongoing
Master Plan Engineering	80,000	450,000	*	Ongoing	Ongoing
Meter Installations	300,000	1,600,000	*	Ongoing	Ongoing
Network System Flow Improvements	15,000	38,000	*	Ongoing	Ongoing
Nortech Parkway East Loop Main	100,000	750,000	750,000	3rd Qtr. 2007	2nd Qtr. 2009
North Coyote Valley Water System	170,000	170,000	8,085,000	2nd Qtr. 2001	3rd Qtr. 2007
North First Street Parallel Main		1,675,000	3,445,000	3rd Qtr. 2008	2nd Qtr. 2011
Norwood Pump Station Replacement	770,000	820,000	850,000	3rd Qtr. 2006	2nd Qtr. 2008
Peppermint Drive Main Replacement		65,000	800,000	1st Qtr. 2012	4th Qtr. 2013
Preliminary Engineering	65,000	355,000	*	Ongoing	Ongoing
Public Art	6,000	48,000	*	Ongoing	Ongoing
Reserve for System Growth Related Projects	1,400,000	1,400,000	1,400,000	N/A	N/A
Reserve for System Rehabilitation/Replacement	1,789,000	2,647,000	2,647,000	N/A	N/A
Reservoir Seismic Retrofit	47,000	47,000	305,000	Multi-phase	Multi-phase
Security Improvements	200,000	200,000	431,000	3rd Qtr. 2004	2nd Qtr. 2008
Service Installations	470,000	2,170,000	*	Ongoing	Ongoing
System Maintenance/Repairs	480,000	2,600,000	*	Ongoing	Ongoing
Villa Vista Reservoir Rehabilitation	315,000	315,000	340,000	3rd Qtr. 2006	1st Qtr. 2008
Water Valve Rehabilitation	135,000	135,000	559,000	3rd Qtr. 2005	3rd Qtr. 2007
Total: Construction/Non-Construction	8,476,000	25,719,000			
Ending Fund Balance	2,491,022	3,174,022	**		
Total: Water Utility System Capital Program	10,967,022	28,893,022	**		

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	2007-2008 Budget	2008-2012 CIP Budget	Total Budget (All Years)	Start Date	End Date
CSA Total: Construction/Non-Construction	128,419,000	418,919,000	**		
Ending Fund Balance	49,837,780	11,449,780	**		
CSA Total:	178,256,780	430,368,780	**		

* Total Budget information is not provided due to the ongoing nature of this project.

**The 2007-2008 through 2010-2011 Ending Balances are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid multiple counting of same funds.